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Comment on Shockley's accusations of "Lysenkoism"
and on his imputations of racial inferiority

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Joshua Lederberg

Dr. William Shockley has been asking for some time to accelerate research to determine whether the poorer strata of our population are genetically defective. He could ask for objective research in human biology, and I would endorse this without reservation. He has also chosen to ventilate his own prejudgment of the results of such research, and this must be denounced as an abuse of his prestige as a scientist.

Dr. Shockley thinks that the scientific study of racial differences is too important a subject to wait for the current pace of work on them. But precisely because of their importance, we must demand the utmost scientific rigor. Or should we proceed on a hazy speculation as a "scientific" excuse for an aggressive attack on the human rights of our most underprivileged brethren?

I share Dr. Shockley's interest in human genetics and population studies. I have published very little in this field, not because of my anxieties about the palatability of the results, but because we lack the scientific means to answer the most pressing questions in the field. However, the genetic study of behavior is making a new start by its convergence with molecular biology and neurophysiology. We do have the basis to expect the emergence of effective scientific methodology during the next decade. Were he to apply his skills as a physical scientist to the investigation of the function and development of the brain, Dr. Shockley might help to advance this branch of science. Or if not that, to help generate badly needed support for basic biological research.

Is the deficit in Negro IQ scores hereditary? How can we tell? There is unanimous agreement among students of child development that the first three years of a child's life are quite crucial for his long range development. We have to keep in mind the extraordinary discrepancies in both psychological and physical environment that characterize the mass Negro subculture. I would place special emphasis on nutritional deficits which may be quite subtle, and which can cause long term damage during pregnancy, even before the birth of the child.

Complete studies of life histories of large samples of people are needed to clarify these questions. We face formidable difficulties in measuring and controlling the environment and in designing meaningful assays of intellectual capability. Even if we could manage the environmental factors, we would face difficult problems of research design. We would have to be particularly careful about where we sampled our individual cases before we generalize from them to whole segments of our society.

The IQ test is the best measure we have to predict further performance in school. It has also acquired a popular mystique as a test of inherent mental ability. Anyone who has taken one recently does not have to be told that it is a broad achievement test -- every skill it measures has to be learned, whether this be vocabulary or arithmetic, or perhaps most important, the attitude that one should make arduous mental effort to succeed, whether at prior learning or at the test itself. Not only do we lack valid tests of "inherent mental ability", we are not at all sure what the concept means. Certainly, the IQ cannot measure the absolute bounds of human capability were this to be competently and compassionately nurtured.

The most illustrative example might be hereditary deaf mutism. Until 150 years ago a hereditary defect in the hearing function was pragmatically equivalent to a virtually total absence of intelligence. Children born deaf never learned to speak, to communicate in any ordinary way, or to participate in any of the vast amount of learning that involves speech. By any IQ test that we could give today, such children would score almost 0. We would have had to say that their "inherent mental ability" was 0. Then we learned how to teach such children, to lip read, and to speak themselves; and by virtue of giving such a child the appropriate educational environment his defect becomes a minor one as far as his intellectual and social participation is concerned.

I would be grateful to be able to discover whatever specific genetic impairments hinder the educational progress of children of any group. As with deaf mutes, it will then cost us something to find and furnish the specific remedies needed to compensate for their discrepancies; but this is likely to be a small price to pay for injecting reality into the ideal of equal opportunity.

Unfortunately Dr. Shockley's overzealous and pejorative commentary, in which his questions are wrapped, can only hinder the objective analysis to which he claims to aspire. We face enormous methodological obstacles in the headon attack on racial intelligence that Shockley advocates. It is these obstacles that stand in the way of scientific studies of race, not the "Lysenkoist" conspiracy that Shockley paints for us. They are, if anything, aggravated by the resentment provoked by Shockley's prejudgements.

Geneticists are in fact deeply concerned about these problems, and in my own opinion, are devoting a degree of attention to them that is relatively reasonable in proportion to the social urgency of such investigations and to the availability of scientific tools with which rigorous findings can be made. Indeed, we do not do enough research in human biology, but this limitation applies across the board to many fields.

In my opinion the most effective approaches will be the dissection of the biochemical and physiological components of brain development, in which genetic analysis of specific single factors will play an important

role. This is likely to be slow and painstaking. Meanwhile, extraordinary efforts are being made on humanitarian grounds to minimize the environmental discrepancies that unquestionably hinder the educational attainments of children of outcast groups. Within these compassionate efforts, I would urge that some model experiments be conducted, perhaps in smaller communities, which can be more effectively surveyed so as to give us the most reliable empirical information on those programs of educational and social improvement likely to have the highest payoff.

Prof. Joshua Lederberg
Department of Genetics
School of Medicine
Stanford University
Stanford, California 94305